

## BlueLine I/O Master Type 8980C

- Transmission of digital control signals between machine and BlueLine system
- Galvanic separation from Bus In/Out
- Connection technology via spring terminal blocks with separate GND per Input / Output
- Dual-color LEDs for a clearly arranged status display
- Protection against short circuit, overvoltage and reverse polarity
- Mechanically robust, space-saving and cascadable
- Connection with adjacent I/O modules without any cable connections via top-hat rail



### Description

The I/O Master type 8980C has digital inputs and outputs and is the basic module of the BlueLine system. It is used for transmitting control signals between the injection molding machine and the BlueLine system.

The spring terminal blocks of the I/O Master are using a push-in design with separate GND for each input and output, providing a simple connection. All outputs are protected against short-circuits, overvoltage and reverse polarity. The status of the input and output signals is clearly displayed by dual-colour status LEDs.

The I/O Master logic and the outputs themselves are energized by the voltage inputs. The I/O Master is separated electrically against the rest of the bus. The system structure, although flexible (electric separation from other bus participants), remains simple (no separate feeding of each output is necessary).

All outputs are read and permanently checked by the I/O Master. If the output level deviates from the target state, the I/O Master reports an error at the corresponding output.

The bus signal is transmitted to the I/O Master via the Bus-In connection. The following I/O Expanders, respectively Bus Interfaces are connected via the delivered top-hat rail bus. Therefore, an external cabling between adjacent I/O modules can be omitted.

## Technical Data

### General

Property	Specification
Dimensions (L x W x H)	107.6 x 61 x 90 mm
Weight	0.432 kg
Working temperature range	0 ... 60 °C
Storage temperature range	-40 ... 80 °C
Conductor connection technology	Spring Terminal Blocks
Hot-plug	Yes
Assembly	Top Hat Rail
ESD protection	4 kV
RoHS-compliant	Yes

### Power Supply

Property	Specification
Voltage range	18 ... 36 V
Standby current consumption	< 100 mA
Max. current consumption	8 A
Power supply via bus	No
Electrically separated against Bus In/Out	Yes
Electrically separated against Inputs / Outputs	No

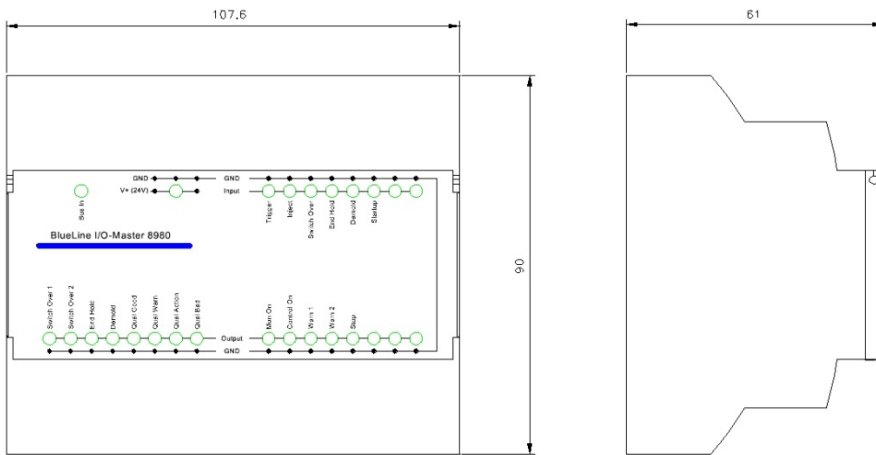
### Outputs

Property	Specification
Continuous current (at 25 °C)	2 A
Peak current (self-limiting)	6 A
Short-circuit-proof	Yes
Rated switching voltage	8 ... 36 V
Surge protection (load dump)	52 V
Potential difference (at 2 A load)	0.4 V
Leakage current	< 10 µA
Switch-on delay	< 180 µs
Switch-off delay	< 200 µs
Maximum switchable inductance (at 2 A load)	< 20 mH
Status display on output HIGH	green
Status display on error (short-circuit, overvoltage) against 24 V	red

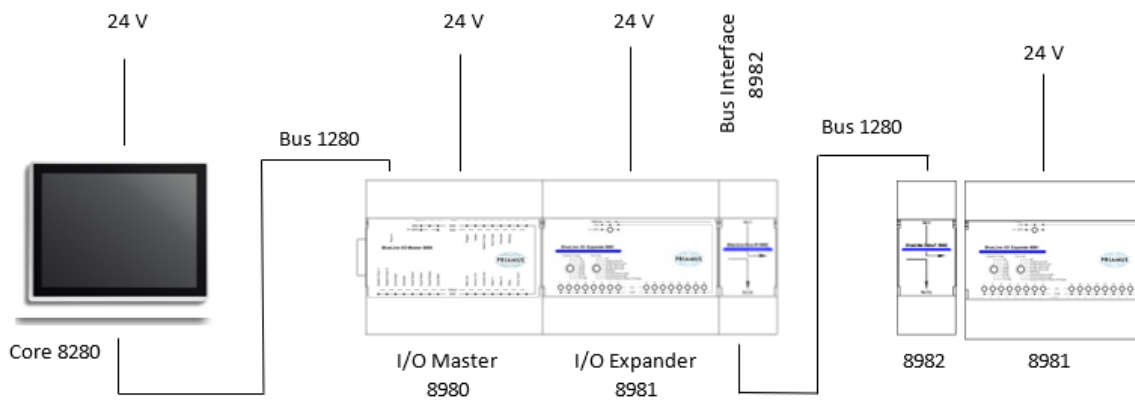
## Inputs

Property	Specification
Max. voltage	52 V
Logic level for HIGH	> 3 V
Logic level for LOW	< 1.5 V
Current consumption	> 3 mA
Status display on input HIGH	green

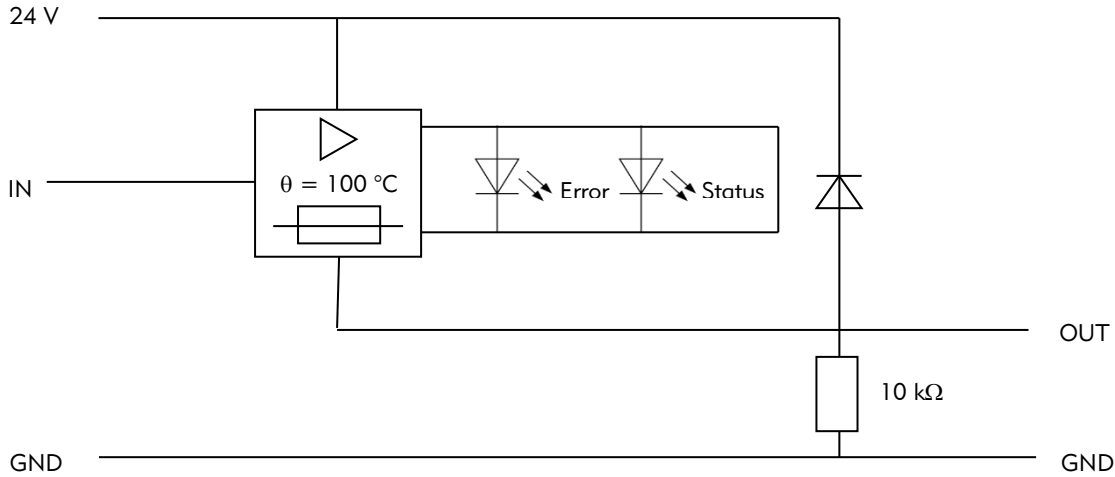
## Dimensions (in mm)



## Interconnection Example in the Bus



**Switching Diagram**



**Coding Switches for Outputs and Inputs**

Output Function	Explanation
Switch Over 1	Switchover Output 1
Switch Over 2	Switchover Output 2
End Hold	Holding pressure terminated
Demold	Open the mold (demold part)
Qual Good	Quality Common Output Good Part
Qual Warn	Quality Common Output Warning Limit violated
Qual Action	Quality Common Output Intervention Limit violated
Qual Bad	Quality Common Output Bad Part Limit violated
Mon On	Monitoring functions of the BlueLine system are active
Switch On	Switch functions of the BlueLine system are active
Control On	Control functions of the BlueLine system are active
Warn 1	General Warning Output
Warn 2	General Warning Output
Stop	General Error Output for the machine
Stop Inject	Over-molding protection (Stop inject immediately)

Input Function	Explanation
Trigger	Start of measurement
Inject	Injection active
Switch Over	Holding pressure begins
End Hold	Holding pressure terminates
Demold	Open the mold (demold part)
Startup	Start-up circuit

## Variant – External Interface

For mounting outside of the control cabinet the separate housing type 8980C-E is available.



## Accessories

Type number	Article
1280Ax	BlueLine hybrid bus connection cable To connect all BlueLine devices, bending radius: 30 mm
1281Ax	Ethernet adapter cable To connect FILLCONTROL Measure, bending radius: 30 mm
5080A-4p	BlueLine amplifier for cavity pressure signals with 4 channels 4 × single-channel connectors Fischer type 102 TRIAX
5080A-16p	BlueLine amplifier for cavity pressure signals with 16 channels 2 × multi-channel connectors Fischer type 104, 16-pin (Code 1)
5080A-4T	BlueLine amplifier for cavity temperature signals with 4 channels 4 × single-channel connectors Fischer type 101 TRIAX
5080A-16T	BlueLine amplifier for cavity temperature signals with 16 channels 2 × multi-channel connectors Fischer type 104, 19-pin (Code 2)
8280C	BlueLine Core Control unit for monitoring and controlling of the injection molding process
8980C	BlueLine I/O Master Basic module for transmitting control signals between the injection molding machine and the BlueLine system.
8982A	BlueLine Bus Interface Coupling module between I/O modules for mounting on top hat rail bus.
9015A	BlueLine inductive switch for easy starting and measuring
9016A	BlueLine power supply unit for: - BlueLine amplifiers types 5080A - BlueLine Core type 8280C
9080A	BlueLine top hat rail bus For mounting of several interconnected BlueLine devices such as I/O Master or I/O Expander

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 Subject to technical amendments  
 Projection method: First Angle Projection